

PROCEEDINGS TO AMEND THE PAWNEE VALLEY IGUCA

JULY 2006

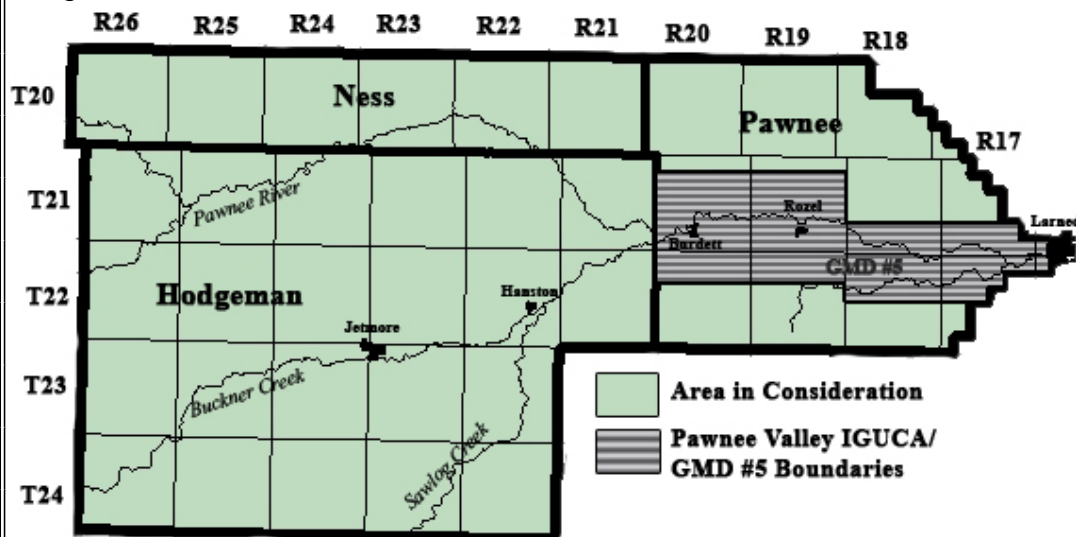
On June 19, 2006, the chief engineer initiated proceedings to amend the order that established the Pawnee Valley Intensive Groundwater Use Area (IGUCA) to include the part of the Pawnee-Buckner-Sawlog subbasin located in Hodgeman, Ness and Pawnee counties. These proceedings will include a public hearing to determine whether the Pawnee Valley IGUCA should be expanded and, if so, to define the new boundaries and the corrective control provisions necessary to regulate ground water use within those boundaries.

The hearing will be open to the public, but only parties to the proceedings will have an opportunity to present argument and evidence and conduct cross-examination of witnesses. Owners of water rights whose source is within the area under consideration, and others who have a legal interest in the outcome of the hearing may become parties to the hearing by attending a pre-hearing conference or filing a petition to the chief engineer for intervention. A time will be set aside for persons who do not wish to become parties to give their statements for the record.

The Subbasin Water Resource Management Program will hold public information meetings in Jetmore and Larned to explain its studies of the Pawnee-Buckner-Sawlog subbasin and water resource management.

AREA UNDER CONSIDERATION

The area under consideration for designation of an IGUCA include parts of the Pawnee-Buckner-Sawlog subbasin located in Hodgeman, Ness and Pawnee counties. There are 755 non-domestic surface water and ground water rights in this area. Ninety-eight percent of the total quantity of water authorized under these water rights is used for irrigation.



SCHEDULE

Public Information Meeting

July 27, 2006

10 a.m.
(9 a.m., Open House)

Jetmore,
King Center

Public Information Meeting

July 27, 2006

3 p.m.
(2 p.m., Open House)

Larned,
Larned City Hall

Pre-hearing Conference

August 16, 2006

1 p.m.
(10 a.m. – noon,
Open House)

Larned,
Larned City Hall

Public Hearing

October 24, 2006

10 a.m.

Larned,
Larned City Hall

Public Comments

October 25, 2006

7 p.m. - 9 p.m.

Larned,
Larned City Hall

WATER RESOURCE MANAGEMENT IN THE PAWNEE-BUCKNER-SAWLOG SUBBASIN

AREA UNDER CONSIDERATION

Township 20 South

Range 17 West, Sections 30, 31, 32

Range 18 West, Sections 5, 6, 7, 8, 14
through 36

Range 26 West through Range 19
West

Township 21 South

Range 16 West, Section 31

Range 17 West, Sections 5 through 9,
15 through 22, and 26 through 36

Range 18 West, Sections 25 through
36

Range 19 West, Sections 7 through 36

Range 20 West, Sections 7 through 36

Range 26 West through Range 18
West

Township 22 South

Range 16 West, Section 6

Range 17 West, Sections 1 through 10,
and 16 through 20, 29, 30, and 31

Range 18 West, Sections 1 through 18

Range 19 West, Sections 1 through 12

Range 20 West Sections 1 through 12

Range 26 West through Range 18
West

Township 23 South

Range 26 West through Range 22
West

Township 24 South

Range 26 West through 22 West

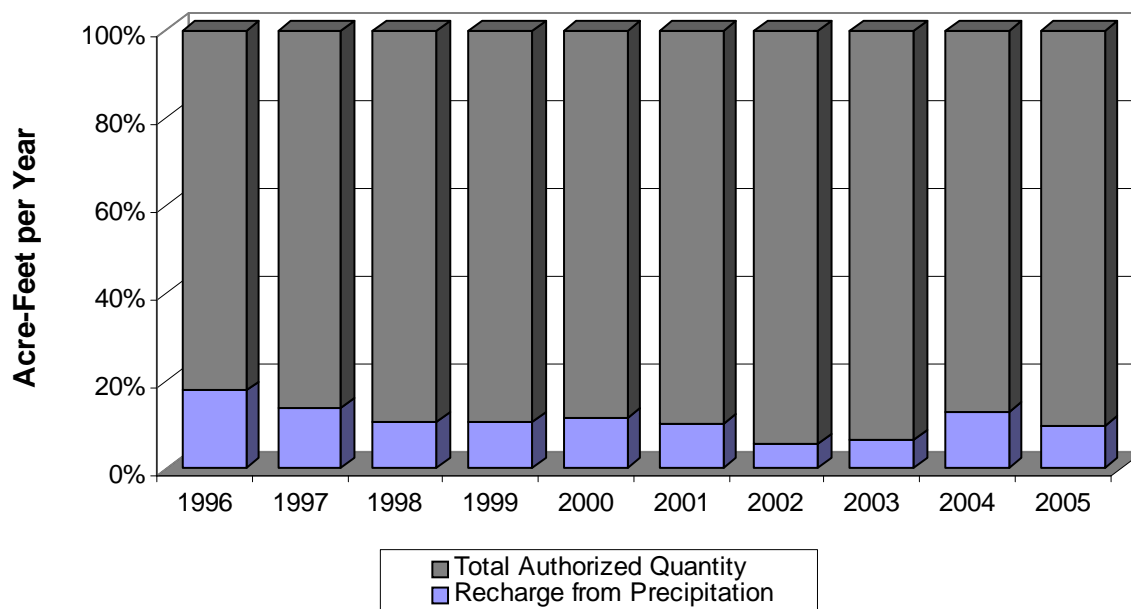
The chief engineer established the Pawnee Valley IGUCA in 1981 after determining that there had been ground water level declines in the Pawnee River alluvium. Only the area located within Groundwater Management District No. 5 between Larned on the East and the Pawnee-Hodgeman County line on the West was included in the IGUCA. In 1994 the State Water Plan directed the chief engineer to address water resource management in the Pawnee River alluvial corridor, to take into consideration the recommendations of an advisory committee including representatives of Hodgeman and Ness counties and to review the status of the Pawnee Valley IGUCA.

The Subbasin Water Resource Management Program, which is funded by the State Water Plan and implemented by the Division of Water Resources, began its study of the Pawnee-Buckner-Sawlog subbasin in 1996 and helped establish an advisory committee to recommend proactive, long-term strategies to conserve water and maintain the availability of water to water users. The committee was made up of representative stakeholders from Pawnee, Hodgeman and Ness counties.

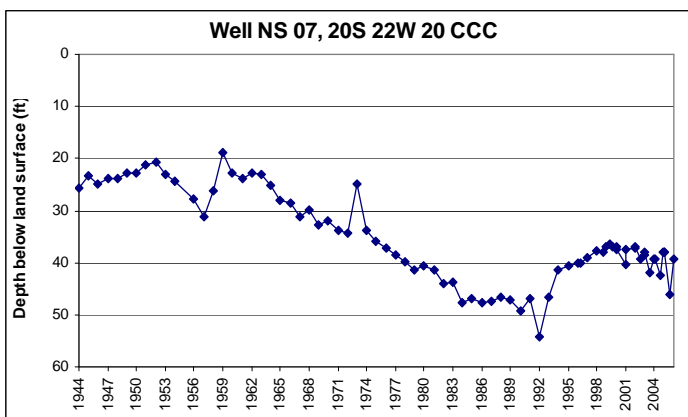
Data obtained by the Subbasin Water Resource Management Program show that ground water levels in the subbasin have declined and that ground water withdrawals exceed the rate of recharge. Based on these data the committee has recommended the adoption of drought contingency plans to address water shortages during extended dry periods.

The Subbasin Water Resource Management Program has prepared a report to the chief engineer describing its studies of the subbasin and analyzing the committee's drought contingency plans. The report and the committee's recommendations, as well as other relevant facts, will be presented to the chief engineer during the public hearing.

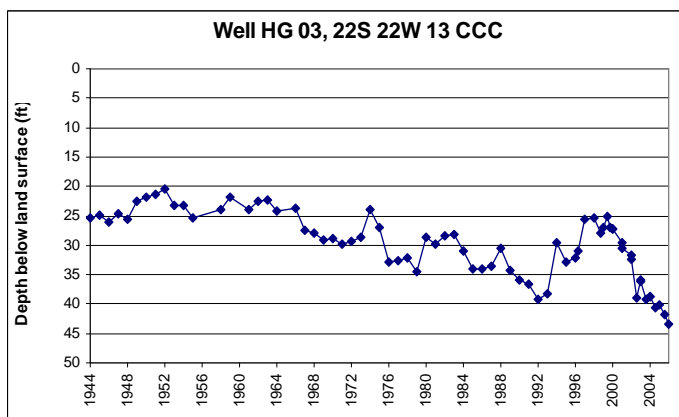
Included here is information prepared by the Subbasin Water Resource Management Program about the hydrogeology of the subbasin, a summary of the committee's drought contingency plans and a summary of the Program's analysis of those plans. This information will be discussed in further detail at the public information meetings to be held in Jetmore and Larned on July 27th. Also included is information about the legal basis for determining whether the Pawnee Valley IGUCA will be expanded and information about the public hearing.



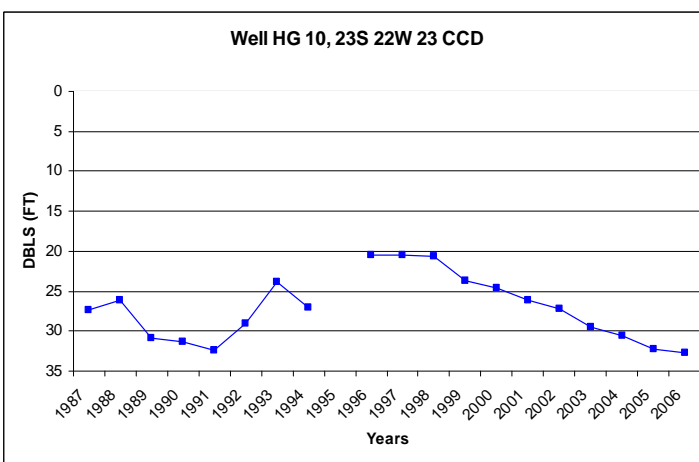
Estimated recharge from precipitation versus the total quantity of authorized water appropriations within the hydrologic subunits in the area under consideration.



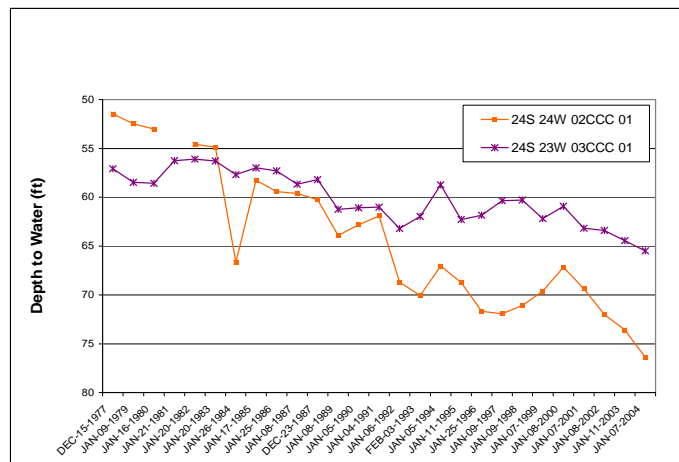
Long-term declines in alluvial water levels along the Pawnee River in Ness County.



Long-term declines in alluvial water levels along Buckner Creek in Hodgeman County.



Annual declines in alluvial water levels along the Sawlog Creek in Hodgeman County.



Annual declines in two Ogallala-High Plains fringe wells in Hodgeman County since 1977.

PAWNEE-BUCKNER SUBBASIN COMMITTEE RECOMMENDATIONS

The Pawnee-Buckner Subbasin Committee was formed in 1996 to recommend proactive, long-term strategies to conserve water and maintain the availability of water to users in the subbasin. The committee included representative stakeholders from Pawnee, Hodgeman and Ness counties. The committee recommended the use of drought contingency plans to reduce the impact on the alluvial aquifer system from ground water withdrawals during drought conditions. Two separate working groups developed slightly different drought contingency plans. One working group consisted of representatives from Pawnee County, and the other included representatives from Hodgeman and Ness counties. Both drought contingency plans recommended that the chief engineer:

- Divide the subbasin into ten hydrologic subunits for management.
- Assign an average water level for each hydrologic subunit, referred to as the “drought level point.”
- Restrict water use only when the drought level point is reached.
- Lift restrictions on ground water use when water levels recover by one foot above the drought level point.
- Extend water use restrictions to adjoining upstream and downstream hydrologic subunits if ground water levels remain below the drought level point for a second or third year.

Pawnee County representatives recommended:

- Establishing the drought level point for the subbasin based on a maximum of 40 percent depletion of the water bearing sand for the alluvial aquifer.
- Restricting water use based on water right priority and the net irrigation requirements for a 50 percent chance rainfall on the maximum number of acres irrigated from 1996 to 2000.
- Restricting water users whose source is the Dakota aquifer as well as those whose source is the alluvial aquifer.
- Requiring owners of vested water rights, both surface and ground water, to submit water conservation plans to the chief engineer.

The Hodgeman and Ness county representatives recommended :

- Establishing the drought level point for Hodgeman and Ness counties based on a maximum of 50 percent reduction of the saturated thickness and a maximum of 40 percent reduction for Pawnee County.
- Restricting water use during drought, except for vested water rights, by a percentage of the average water use from 1996 through 2000 based on priority of water right.
- Not restricting water users whose source is the Dakota aquifer if the alluvium is sealed off.
- Prohibiting the use of end guns.

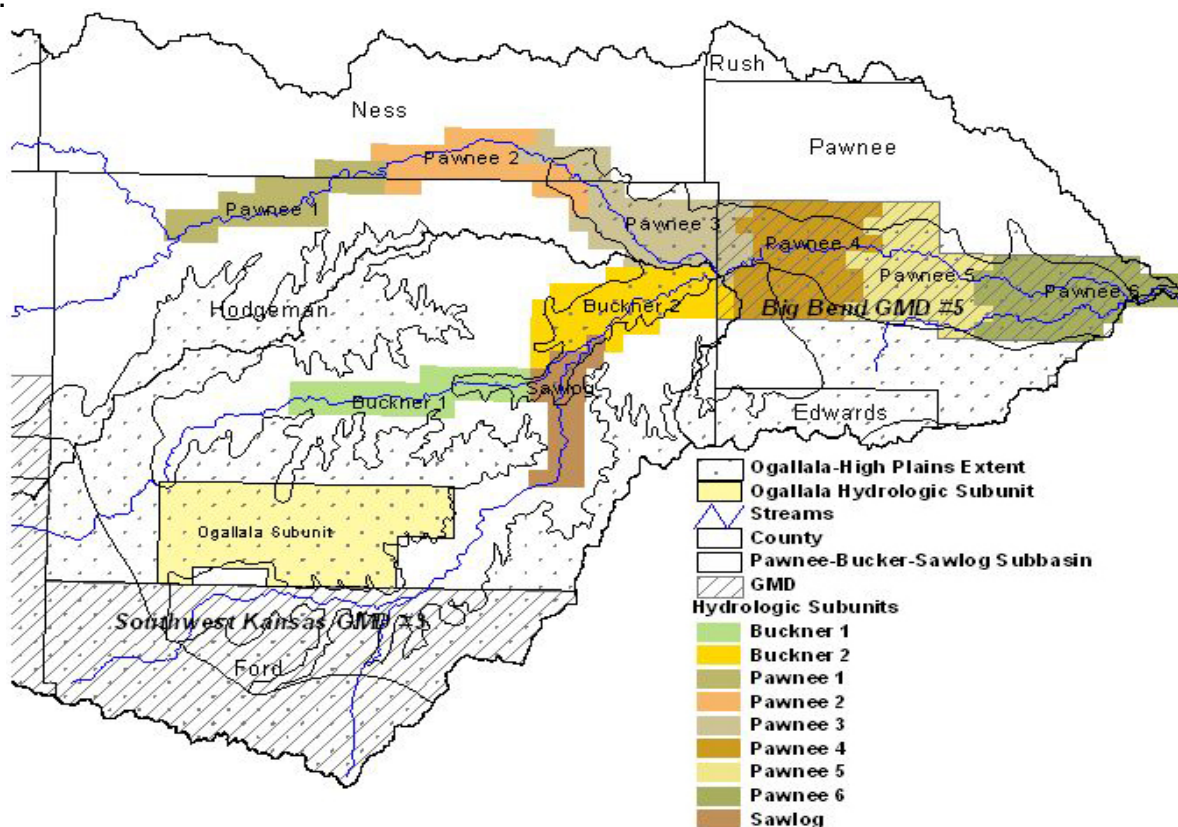
SUBBASIN WATER RESOURCE MANAGEMENT ANALYSIS

Drought Contingency Plan

The adoption and implementation of a drought contingency plan will reduce the impact of ground water withdrawals during extended periods of drought, but does not address the overall decline in ground water levels. Surface water rights are not addressed.

Hydrologic Subunits

Management of the subbasin by hydrologic subunits is appropriate if the boundaries of each subunit are based on the hydrologic properties of the area and if regulated water rights are contained in only one subunit. The subbasin can be divided into nine hydrologic subunits in the alluvial valley. A tenth hydrologic subunit consisting of water rights whose source is the Ogallala-High Plains aquifer should be added based on the water level declines seen in that subunit.



Water Use Reductions

The water use reductions recommended by both of the working groups will result in the withdrawal of less water during drought conditions. Basing water use restrictions on a net irrigation requirement allows water use to produce crops such as corn, sorghum and soybeans and is easily understood by the agricultural community. These restrictions can be expected to slow the decline of the water levels during times of drought while allowing for limited irrigation.

Drought Level Points

Establishing a drought level point for each hydrologic subunit allows for depletion of ground water levels before reduction in water use is required. At the 40 percent depletion recommended by the Pawnee County representatives and at the 50 percent depletion recommended by the Hodgeman-Ness county representatives, the drought contingency plans would not be implemented until water levels had been depleted below the lowest recorded water levels, which occurred in 1992.

SUBBASIN WATER RESOURCE MANAGEMENT ANALYSIS

(CONTINUED)

It is unlikely that any recommended water reductions will be effective if water levels are depleted to this extent before the drought contingency plan is implemented.

Subunit	Average top elevation of the water-bearing aquifer (FT-BLS*)	Average depth to bedrock (FT-BLS*)	Average water-bearing aquifer thickness (FT)	1992 average water level (FT-BLS*)	Average water level at 40% depletion (FT-BLS*)	Average water level at 50% depletion (FT-BLS*)
Pawnee 1	26.95	57.00	30.05	35.99	38.97	41.98
Pawnee 2	37.48	84.66	47.18	50.39	56.35	61.07
Pawnee 3	47.81	102.26	54.44	55.41	69.59	75.03
Pawnee 4	43.95	102.50	58.55	49.10	67.37	73.23
Pawnee 5	38.95	106.44	67.49	43.85	65.95	72.70
Pawnee 6	36.46	100.05	63.59	33.44	61.90	68.26
Buckner 1	31.75	60.14	28.39	31.46	43.11	45.95
Buckner 2	35.55	84.74	49.19	45.16	55.23	60.15
Sawlog	34.92	74.75	39.83	33.24	50.85	54.84

BLS = below land surface

Ogallala-High Plains Hydrologic Subunit

The Ogallala-High Plains hydrologic subunit is a deeper aquifer, which does not recharge as quickly as the alluvial aquifer. Therefore, a management approach in which the overall quantity of ground water use is limited and is more appropriate for this subunit. The Subbasin Water Resource Management Program has determined the estimated recharge within this subunit and the quantity of appropriated water rights. This data can be used to determine allowable ground water use.

Dakota Wells

Wells which draw from the confined Dakota aquifer do not represent a significant source of ground water withdrawals from the alluvial aquifer, provided the wells are adequately grouted and sealed throughout the alluvial aquifer interval.

Water Conservation Plans

Neither vested water rights nor municipal water rights would receive additional regulation under the drought contingency plans. These water users can help preserve water resources within the subbasin by preparing and implementing enforceable water conservation plans.

End Guns

The use of end guns is considered an inefficient use of water. It is appropriate to cease this practice when the drought contingency plan is in effect.

Monitoring

Stakeholders should continue to be advised of ground water level data, climate data and water use so management decisions can be updated based on these critical factors. Additional monitoring wells may be required in some hydrologic subunits.

Enforcement

It is important that there be penalties for exceeding water use reductions when they are in effect. Penalties in the form of additional water use restrictions are likely to be most effective to discourage overpumping and to offset excessive withdrawals.

HYDROGEOLOGY OF THE PAWNEE-BUCKNER-SAWLOG SUBBASIN

Three aquifer systems supply ground water in the Pawnee-Buckner-Sawlog subbasin; the alluvial, the Ogallala High-Plains and the Dakota. The three aquifers are hydraulically connected to some degree, and the Ogallala High-Plains and the Dakota aquifers can contribute water to the alluvium.

Alluvial Aquifer

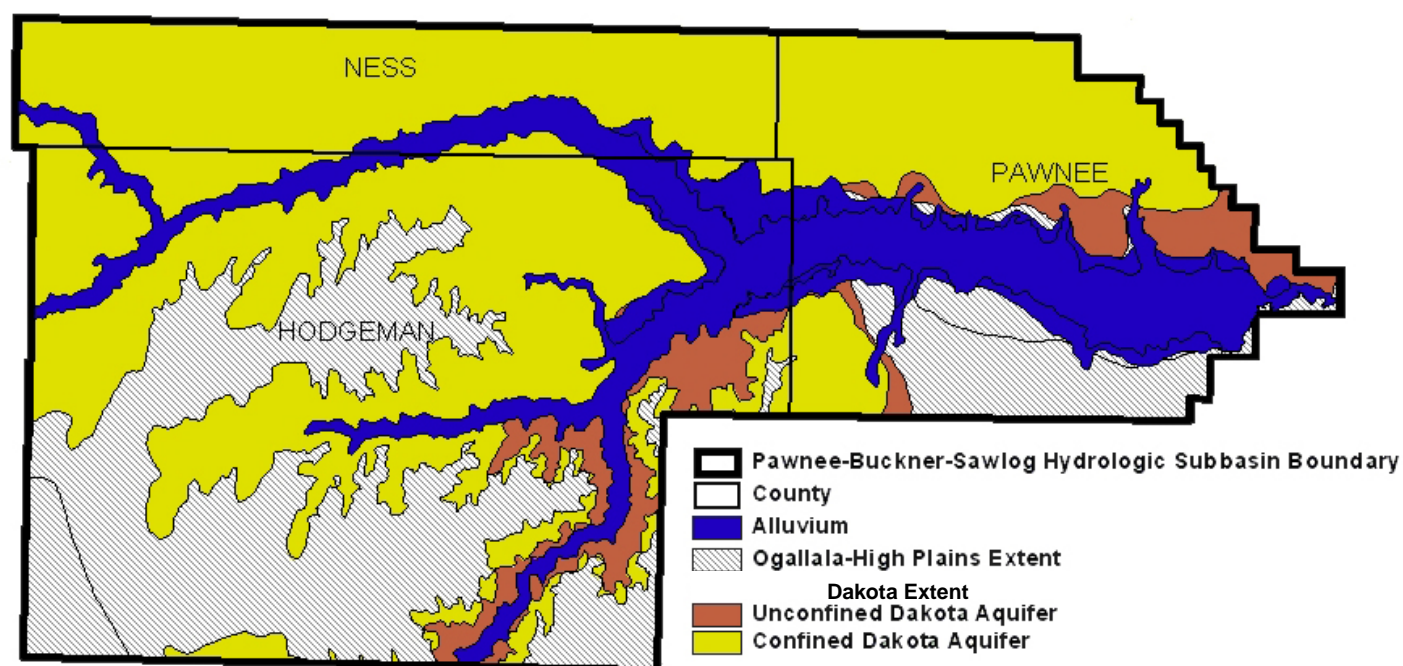
The alluvial aquifer consists of sand, gravel, silt and clay. Thick deposits of silt and clay slow down and limit the quantity of ground water recharge from precipitation. Beneath the silt and clay is a thick deposit of gravel and sand that yields large quantities of water to wells in the subbasin. This is locally referred to as the water-bearing sand. The alluvium is up to 138 feet thick in Pawnee County, and up to 100 feet thick in Hodgeman and Ness counties.

Ogallala High-Plains Aquifer

The Ogallala High-Plains aquifer consists of silt, sand and gravel containing layers of cemented silt, sand and gravel, also known as caliche or mortar beds. The formation creates the divide between Buckner and Sawlog creeks. The thickness of the aquifer ranges from 66 feet to 250 feet. Water retained in the aquifer is slowly released to the alluvium after an initial recharge event.

Dakota Aquifer

The Dakota aquifer lies beneath the Ogallala formation. The aquifer consists of small bodies of sandstone intermingled with relatively watertight shales. The Dakota aquifer is both confined and unconfined in the subbasin. The Dakota and the alluvial aquifers hydraulically connect in areas of the unconfined Dakota, and water flows from the confined into the unconfined Dakota along the Pawnee River, Buckner Creek and Sawlog Creek. Water use in the Dakota aquifer influences the alluvial aquifer by intercepting flows that eventually would be discharged to the alluvium and by causing water to move from the alluvium into the confined Dakota.



LEGAL BASIS FOR PROCEEDINGS

In 1978, the Kansas Legislature gave the chief engineer the authority to designate IGUCAs within the state. These are areas of special concern resulting from excessive declining ground water levels, rates of withdrawals in excess of rates of recharge, unreasonable deterioration of water quality, preventable waste of water, or other conditions requiring regulation of the ground water source. K.S.A. 82a-1036 – 1038. The chief engineer may initiate proceedings to designate an IGUCA when he has reason to believe any of these conditions exist.

If an area is designated as an IGUCA the chief engineer is authorized to require ground water right holders within the area to implement provisions to correct the condition or conditions found to exist. These “corrective control provisions” may include reducing the amount of water that can be appropriated, temporarily shutting off or reducing the quantity or rate of pumping from certain wells, and any other provision necessary to protect the public interest. The chief engineer also may refuse to accept applications for permits to appropriate water within the designated area.

Before the chief engineer may designate an area as an IGUCA and order water right holders in the area to implement corrective control provisions, he must hold a public hearing. Written notice of the hearing must be given to all water right holders in the area being considered and must be published in a newspaper of general circulation at least 30 days prior to the hearing. Evidence in the form of documents and testimony is accepted at the hearing and a record is made of the hearing. This evidence is used by the chief engineer to determine whether conditions exist that require regulation of the groundwater source. If the chief engineer finds that such conditions exist, he will issue an order designating an IGUCA. The order will include necessary corrective control provisions.

PARTICIPATION IN THE PUBLIC HEARING

Owners of water rights whose source is ground water within the part of the Pawnee-Buckner-Sawlog subbasin located in Hodgeman, Ness and Pawnee counties have a right to receive notice of and participate in the public hearing. The chief engineer may allow others to participate if they have substantial legal rights that might be affected. If you own a water right or otherwise have a substantial legal interest you may participate either as a party or by giving an oral or written statement to be included in the record of the public hearing. Your decision to participate should be based on your determination of how your interests and concerns can be best recognized.

If you choose to participate as a party you will have an opportunity to present argument and evidence and conduct cross-examination of witnesses. You will be expected to attend the scheduled pre-hearing conference and any other preliminary conferences. You will be required to provide the chief engineer and all other parties with a list of your witnesses and copies of your evidence. If you fail to comply with the instructions of the hearing officer you might lose your right to present some of your evidence.

If you do not wish to participate as a party you can elect to give an oral or written statement to the chief engineer. The oral statement will be given under oath or affirmation at a time set aside for this purpose. Your written statement will become part of the record if it is delivered or postmarked before the date specified by the chief engineer.

A water right holder may become a party to the hearing by attending and requesting party status at the pre-hearing conference or by filing a petition for intervention pursuant to K.S.A. 77-521. Anyone may attend the public hearing and may give relevant oral and written statements for the record.

PUBLIC HEARING *OCTOBER 24, 2006, 10 A.M. - LARNED CITY HALL*

The public hearing is scheduled to begin at 10 a.m. on October 24, 2006 and will continue as long as is necessary. This will depend on the number of parties and the extent of the evidence to be presented. The hearing will be open to the public, but only the parties can present evidence and argument and conduct cross-examination.

PUBLIC COMMENTS *OCTOBER 25, 2006, 7 P.M. - LARNED CITY HALL*

If you are not a party to the public hearing you may present an oral statement at a hearing segment scheduled for 7 p.m. on October 25, 2006. You will be required to give your statement under oath or affirmation. You may submit written statements to the chief engineer before 5 p.m. on the last day of the hearing or within such additional time as he may allow. Written statements can be mailed to the chief engineer at the Division of Water Resources or faxed to (785) 296-1176.

PRE-HEARING CONFERENCE *AUGUST 16, 2006, 1 P.M. - LARNED CITY HALL*

If you wish to participate as a party to the hearing you should attend a pre-hearing conference at 1 p.m. on August 16, 2006. Representatives of the Division of Water Resources will hold an open-house information session will be held before the pre-hearing conference, from 10 a.m. until noon, to answer questions and provide assistance.

The purpose of the pre-hearing conference is to identify the parties and the issues to be addressed and to set preliminary deadlines, if necessary. At the pre-hearing conference you will be asked to identify the water right you own, your interest in a specific water right, or the nature of your interest in these proceedings. Unless you are excused by the chief engineer, if you do not appear at the pre-hearing conference and you wish to participate as a party to the hearing you must file a petition for intervention pursuant to K.S.A. 77-521.

Please notify the chief engineer if you are planning on attending the pre-hearing conference. Attorneys must make a written appearance no later than August 9, 2006, identifying their client(s), the water right(s) affected, and the nature of their client(s)' interest in these proceedings. Written appearances and notices should be sent to the chief engineer at the Division of Water Resources or by fax at (785) 296-1176.

PUBLIC INFORMATION MEETINGS

The Subbasin Water Resource Management Program will provide information about the Pawnee-Buckner-Sawlog subbasin and the proceedings to amend the Pawnee Valley IGUCA at public information meetings in Jetmore and Larned on July 27, 2006. Each meeting will be preceded by an informal open house session. The open house in Jetmore will begin at 9 a.m. and, and the public information meeting will be at 10 a.m. At Larned the open house will begin at 2 p.m., and the public information meeting will be at 3 p.m. You are encouraged to attend one of these meetings.

NOTICES

This is the only notice you will receive before the public information meetings and the pre-hearing conference. However, notice will be published in the *Ness County News*, the *Jetmore Republican* and the *Larned Tiller & Toiler* in July 2006. Written notice of the public hearing will be given to every water right owner whose source is within the area under consideration and also will be published in the *Ness County News*, the *Jetmore Republican* and the *Larned Tiller & Toiler* in September 2006.

Kansas Department of Agriculture's
Division of Water Resources
Subbasin Water Resource Management Program
109 SW 9th Street, 2nd Floor
Topeka, KS 66612-1283 046-080

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Jetmore, Kansas

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7 p.m. - 9 p.m.
Larned City Hall

For further information about any of these events, please contact Eve Tracy at (785) 296-3705 or Bruce Falk, Water Commissioner, Division of Water Resources, Stafford Field Office at (620) 234-5311.